

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Kie Y. Ahn et al.  
Serial No.: 10/789,042  
Filed: February 27, 2004  
Title: LaAlO3 FILMS

Examiner: Matthew C. Landau  
Group Art Unit: 2815  
Docket: 1303.050US2

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**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Supplemental Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Supplemental Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Supplemental Information Disclosure Statement considered.

Applicant brings to the attention of the Examiner the following Office Actions and responses associated with one or both of the inventors of the instant application and/or the assignee of the instant application. This material is available and accessible at the United States Patent and Trademark Office.

LANTHANIDE OXIDE DIELECTRIC LAYER

Application Serial No. 10/926,812 (Atty Ref 1303.121US1) , Notice of allowance mailed 02-09-2006, 19 pgs

Application Serial No. 10/926,812 (Atty Ref 1303.121US1), Non-final office action mailed 09-29-2005, 23 pgs

Application Serial No. 10/926,812 (Atty Ref 1303.121US1), Notice of allowance mailed 05-16-2005, 14 pgs

Application Serial No. 10/926,812 (Atty Ref 1303.121US1), Response filed 12-29-2005 to non-final office action mailed 09-29-2005, 13 pgs

Application Serial No. 10/926,812, (Atty Ref 1303.121US1) Amendment under 37 C.F.R. filed 2/9/2006, 2 pgs

Application Serial No. 10/926,812, (Atty Ref 1303.121US1) Non-Final Office Action mailed 9/29/2005, 5 pgs

Application Serial No. 10/926,812, (Atty Ref 1303.121US1) Notice of allowance mailed 2/9/2006, 4 pgs

Application Serial No. 10/926,812, (Atty Ref 1303.121US1) Notice of allowance mailed 5/16/2005, 4 pgs

Application Serial No. 10/926,812, (Atty Ref 1303.121US1) Response filed 12/29/2005 Non-Final Office Action mailed 9/29/2005, 13 pgs

ATOMIC LAYER DEPOSITED LANTHANUM ALUMINUM OXIDE DIELECTRIC LAYER

Application Serial No. 10/930,167 (Atty Ref 1303.122US1) Response filed 10-3-07 to Restriction Requirement mailed 10-4-06,

Application Serial No. 10/930,167 (Atty Ref 1303.122US1) Restriction Requirement mailed 10-4-06, 4 pgs

HfAlO3 FILMS FOR GATE DIELECTRICS

Application Serial No. 10/930,431 (Atty Ref 1303.056US2), Response filed 11-19-07 to Final Office Action, 11 pgs.

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Final Office Action mailed 07-11-2007, 5 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Final Office Action mailed 08-01-2006, 4 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Non Final Office Action mailed 01-17-2007, 4 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Non Final Office Action mailed 02-09-2006, 4 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Non Final Office Action mailed 08-24-2005, 4 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Response filed 04-12-2007 to Non Final Office Action mailed 01-17-2007, 13 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Response filed 05-09-2006 to Non Final Office Action mailed 02-09-2006, 9 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Response filed 09-11-2007 to Final Office Action mailed 07-11-2007, 11 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Response filed 10-02-2006 to Final Office Action mailed 08-01-2006, 16 pgs

Application Serial No. 10/930,431 (Atty. Ref. 1303.056US2) Response filed 12-21-2005 to Non Final Office Action mailed 08-24-2005, 12 pgs

#### DEVICES WITH HfSiON DIELECTRIC FILMS WHICH ARE Hf-O RICH

Application Serial No. 10/930,516 (Atty. Ref. 1303.078US2) Response filed 06-08-2007 to Non Final Office Action mailed 03-08-2007, 15 pgs

#### Zr-Sn-Ti-O FILMS

Application Serial No. 10/931,341 (Atty Ref 1303.082US2), Response filed 11-13-07 to Final Office Action mailed 9-12-07, 12 pgs.

Application Serial No. 10/931,341 (Atty. 1303.082US2) Final Office Action Mailed 09/12/2007, FOAR,18 Pages

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Advisory Action mailed 06-13-2006, 3 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Final Office Action mailed 03-24-2006, 11 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Non Final Office Action mailed 03-08-2007, 6 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Non Final Office Action mailed 08-29-2005, 17 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Non Final Office Action mailed 09-13-2006, 6 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Response filed 05-24-2006 to Final Office Action mailed 03-24-2006, 15 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Response filed 06-08-2007 to Non Final Office Action mailed 03-08-2007, 11 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Response filed 06-26-2006 to Advisory Action mailed 06-13-2006, 15 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Response filed 11-21-2005 to Non Final Office Action mailed 08-29-2005, 12 pgs

Application Serial No. 10/931,341 (Atty. Ref. 1303.082US2) Response filed 12-13-2006 to non-final office action mailed 09-13-2006, 11 pgs

#### ELECTRONIC DEVICES HAVING LANTHANIDE DIELECTRICS

Application Serial No. 10/931,365 (Atty Ref 1303.059US2) final office action mailed 4-30-2007, 9 pgs

Application Serial No. 10/931,365 (Atty Ref 1303.059US2) non-final office action mailed 10-30-2006, 8

pgs

Application Serial No. 10/931,365 (Atty Ref 1303.059US2) Response filed 1-30-2007 to non-final office action mailed 10-30-2006, 16 pgs

Application Serial No. 10/931,365 (Atty Ref 1303.059US2) Response filed 6-29-2007 to final office action mailed 4-30-2007, 15 pgs

#### EVAPORATED LaAlO<sub>3</sub> FILMS FOR GATE DIELECTRICS

Application Serial No. 11/059594 (Atty. Ref. 1303.046US2) Non-Final Office Action mailed 11/2/07, 24 pgs

#### ELECTRONIC APPARATUS WITH DEPOSITED DIELECTRIC LAYERS

Application Serial No. 11/213,013 (Atty Ref 1303.090US2), Non-Final office action mailed 08-09-2006, 14 pgs

Application Serial No. 11/213,013 (Atty Ref 1303.090US2), Notice of Allowance mailed 11-27-2007, NOAR, 16 pgs

Application Serial No. 11/213,013 (Atty Ref 1303.090US2), Response filed 11-09-2006 to non-final office action mailed 08-09-2006, 9 pgs

Application Serial No. 11/213,013 (Atty Ref Notice 1303.090US2), Notice of Allowance and Fee(S) Due mailed 08/06/2007, NOAR, 32 pgs

Application Serial No. 11/213,013 (Atty. Ref. 1303.090US2) Final Office Action mailed 02-13-2007, 6 pgs

Application Serial No. 11/213,013 (Atty. Ref. 1303.090US2) Non Final Office Action mailed 8/9/2006, 5 pgs

Application Serial No. 11/213,013 (Atty. Ref. 1303.090US2) Response filed 11-08-2006 to Non Final Office Action mailed 08-09-2006, 9 pgs

Application Serial No. 11/213,013, (Atty Ref 1303.090US2) Response filed 11-09-2006 to Non Final Office Action mailed 08-09-2006, 9 pgs

Application Serial No. 11/213,013, (Atty Ref 1303.090US2) Response filed 3/30/2007 Final Office Action mailed 2/13/2007, 10 pgs

Pursuant to 37 C.F.R. 1.98(a)(2), Applicant believes that copies of cited U.S. Patents and Published Applications, and Non-Published Applications identifiable by USPTO Serial Number, are no longer required to be provided to the Office. Notification of this change to this effect was provided in the United States Patent and Trademark Office OG Notices dated October 12, 2004 and October 19, 2004. Thus, Applicant has not included copies of any US Patents or US Patent Applications identifiable by serial number that may be cited with this submission. Should the Office require copies to be provided, Applicant respectfully requests that notice of such requirement be


directed to Applicant's below-signed representative. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

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(612) 371-2157

Date 12 December 2007 By \_\_\_\_\_

  
David R. Cochran  
Reg. No. 46,632

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this \_\_\_\_\_ day of December 2007.

JUDY DENT  
Name \_\_\_\_\_

  
Signature \_\_\_\_\_